

# CALIFORNIA HIGH-SPEED TRAIN SYSTEM



- Provide a new mode of high-speed intercity travel to link major metropolitan areas
- Forecasted to carry as many as 100 million passengers annually by the year 2035
- 800-mile system with stations built to allow for express service
- Service linking the San Francisco Bay Area, Central Valley and Southern California
- 100% clean electric power
- Estimated travel time from San Francisco to Los Angeles: less than 2 hours 40 minutes

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# ***DESIGN OBJECTIVES AND EVALUATION CRITERIA***

## **OBJECTIVE**

- **Maximize ridership & revenue potential**
- **Maximize accessibility**
- **Minimize operating and capital costs**

## **CRITERIA**

- **Minimize travel time**
- **Intermodal connections**
- **Minimize route length**

## **EVALUATION MEASURES**

- **Minimize disruption to neighborhoods and communities**
- **Minimize impacts to environmental resources**
- **Minimize impacts to natural resources**
- **Land use**
- **Construction feasibility**

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# THE STARTING POINT

**Initial infrastructure construction will begin in the Central Valley, the backbone of the system:**

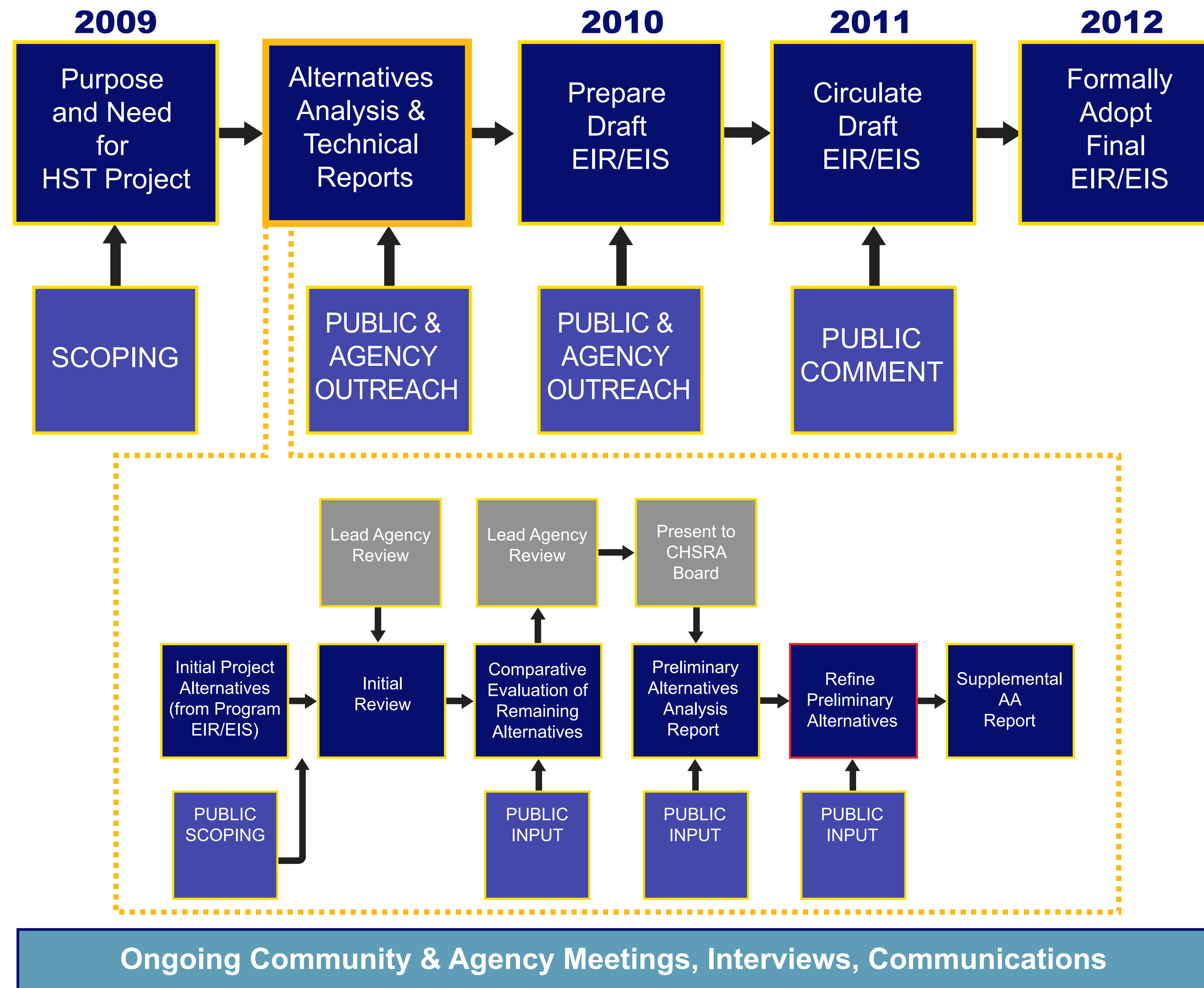
- Construction starting in second half of 2012, investing \$5.5 billion into the economy
- Potential to create nearly 100,000 jobs
- More than 120 miles from north of Fresno near Madera to Bakersfield – a choice that:
  - Meets state and federal requirements
  - Gives the greatest flexibility to build both north and south as funding becomes available
  - Constitutes the backbone of a system that will reach across the whole state



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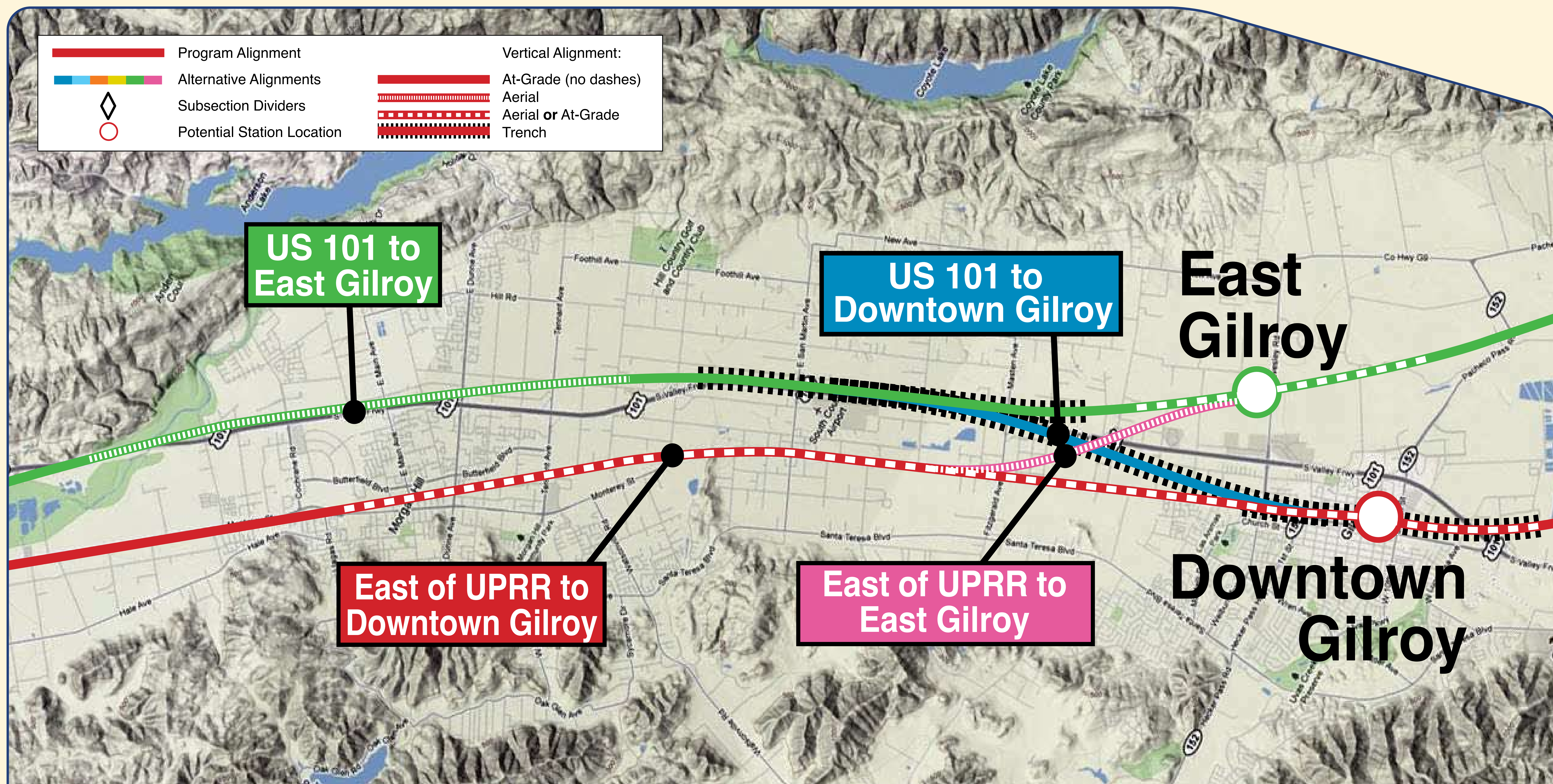
# PROJECT ENVIRONMENTAL REVIEW SCHEDULE AND ALTERNATIVES ANALYSIS PROCESS



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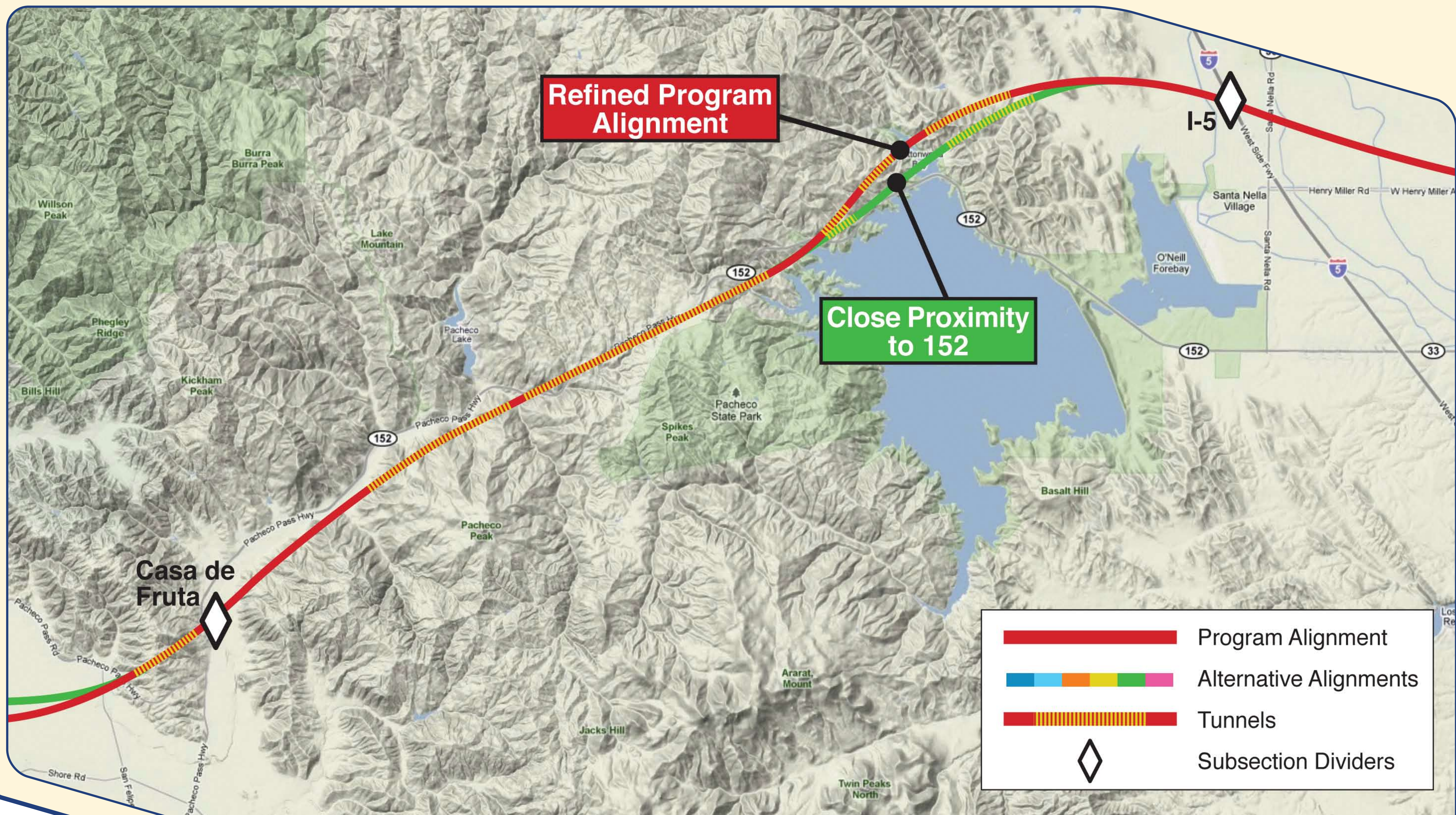
# MORGAN HILL-GILROY SUBSECTION



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# PACHECO PASS SUBSECTION



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# ***SAN JOSE-MERCED SIMULATIONS***



**Downtown Gilroy (6th St.)**

**Casa de Fruta**



**Monterey Rd.**

**Los Banos Wildlife Area at Henry Miller Rd.**

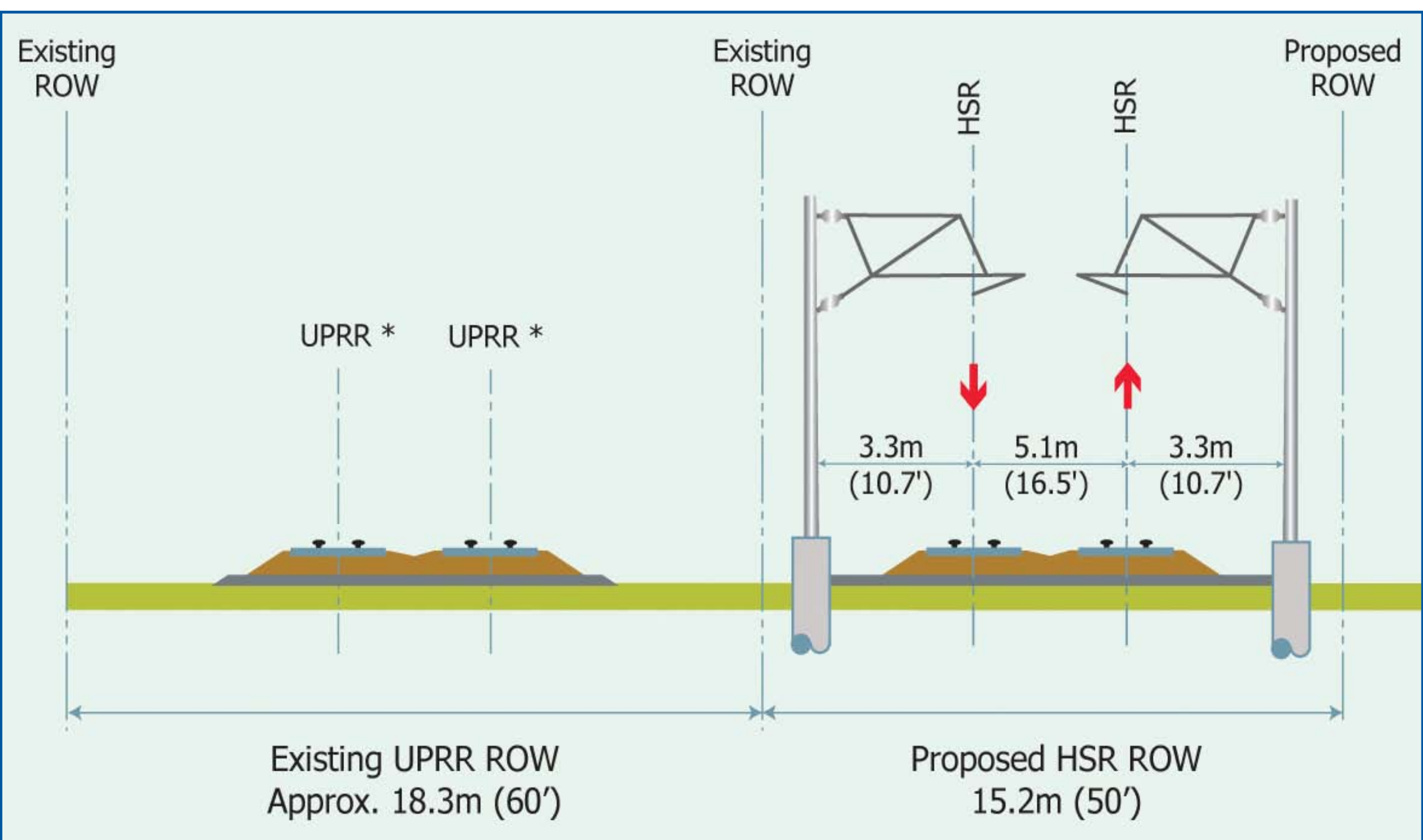


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# TYPICAL SECTIONS ALONG ALIGNMENT

## Shared Railroad Corridor

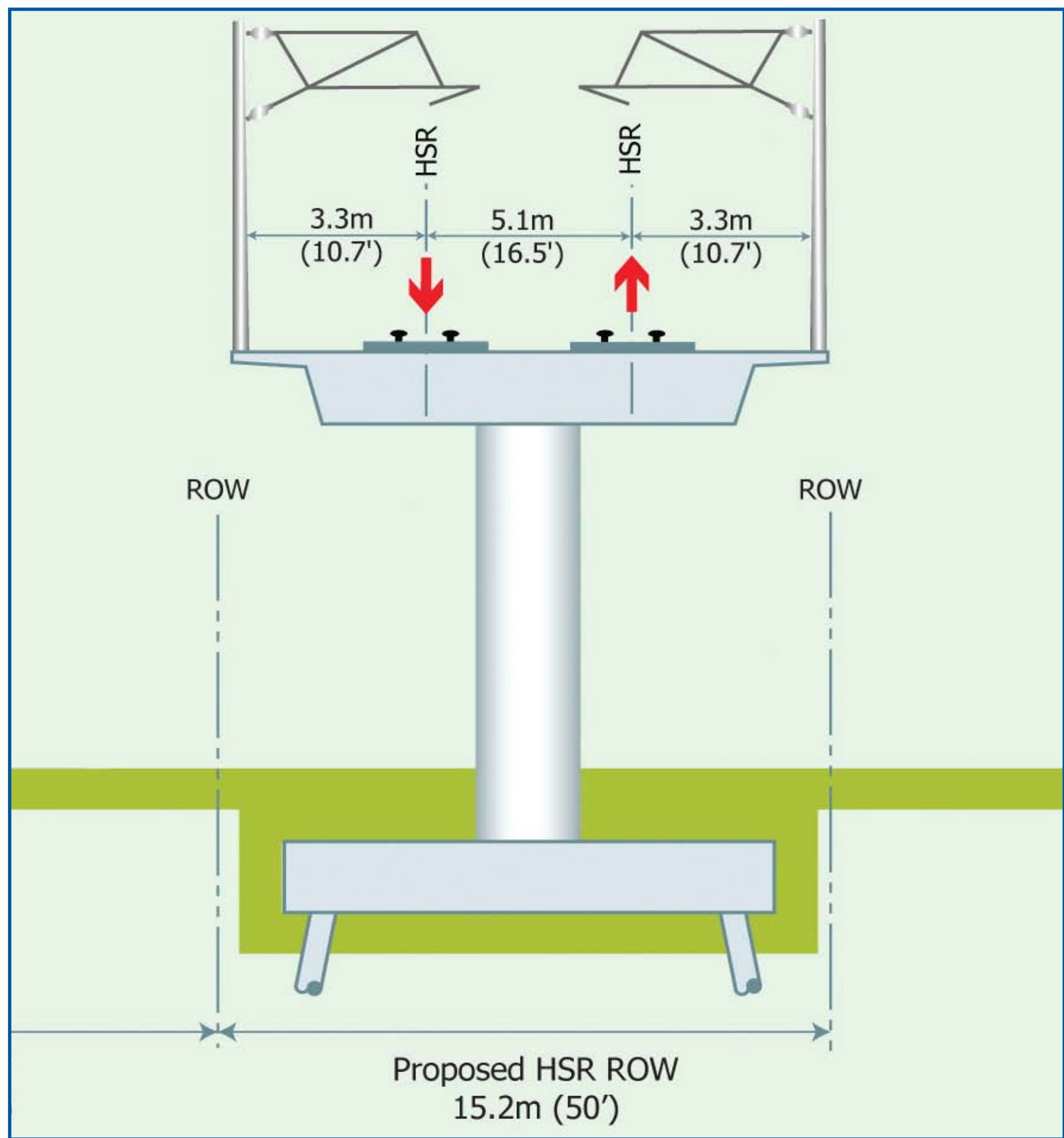


Portions of the alignment will need special structures to fit into the built environment

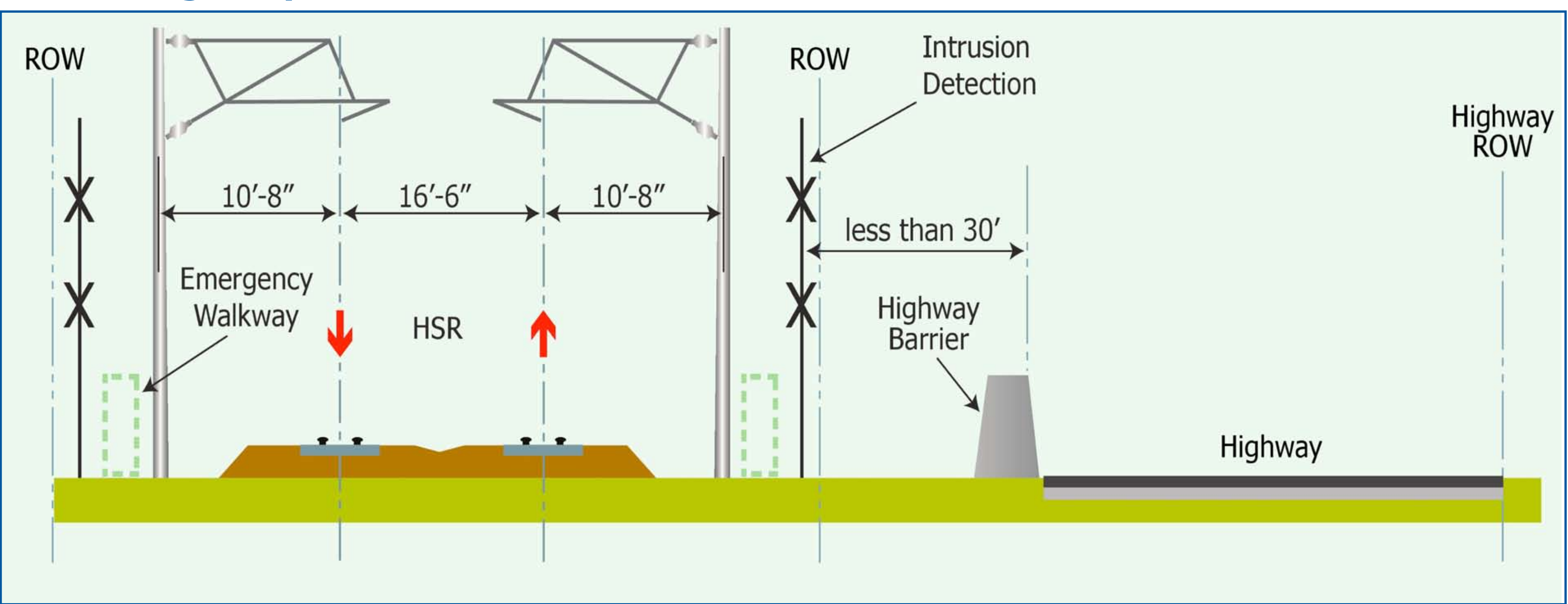
Structures could include:

- Aerial structures
- At-grade
- Trenches

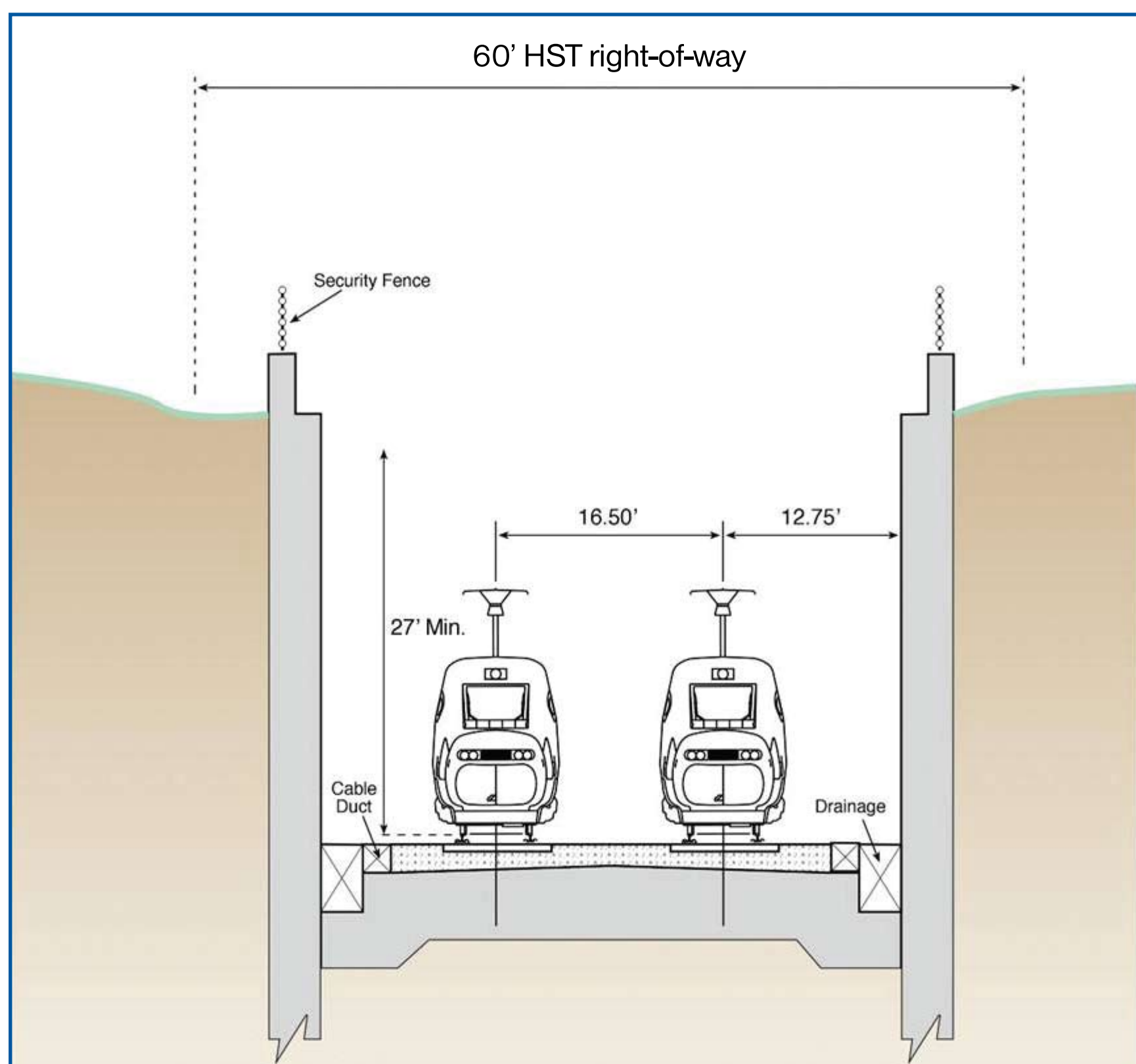
## Aerial Structure



## Shared Highway Corridor



## Trench Section



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# GRADE SEPARATIONS



*Before*

## Typical Underpass

*After*



- Grade separations are underpasses and overpasses where roadways cross railroad tracks
- Grade separations reduce congestion and noise and improve safety
- California High-Speed Train tracks will be grade-separated from adjacent roadways

## Typical Overpass



## Grade Separated from Roadway



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# ***MITIGATION MEASURES UNDER ELEVATED GUIDEWAY***



**Agricultural Use Under Guideway**



- FRA has approved joint use under HST Guideway
- Linear parks, paths and roadways may be considered

**Joint Use in Italy**



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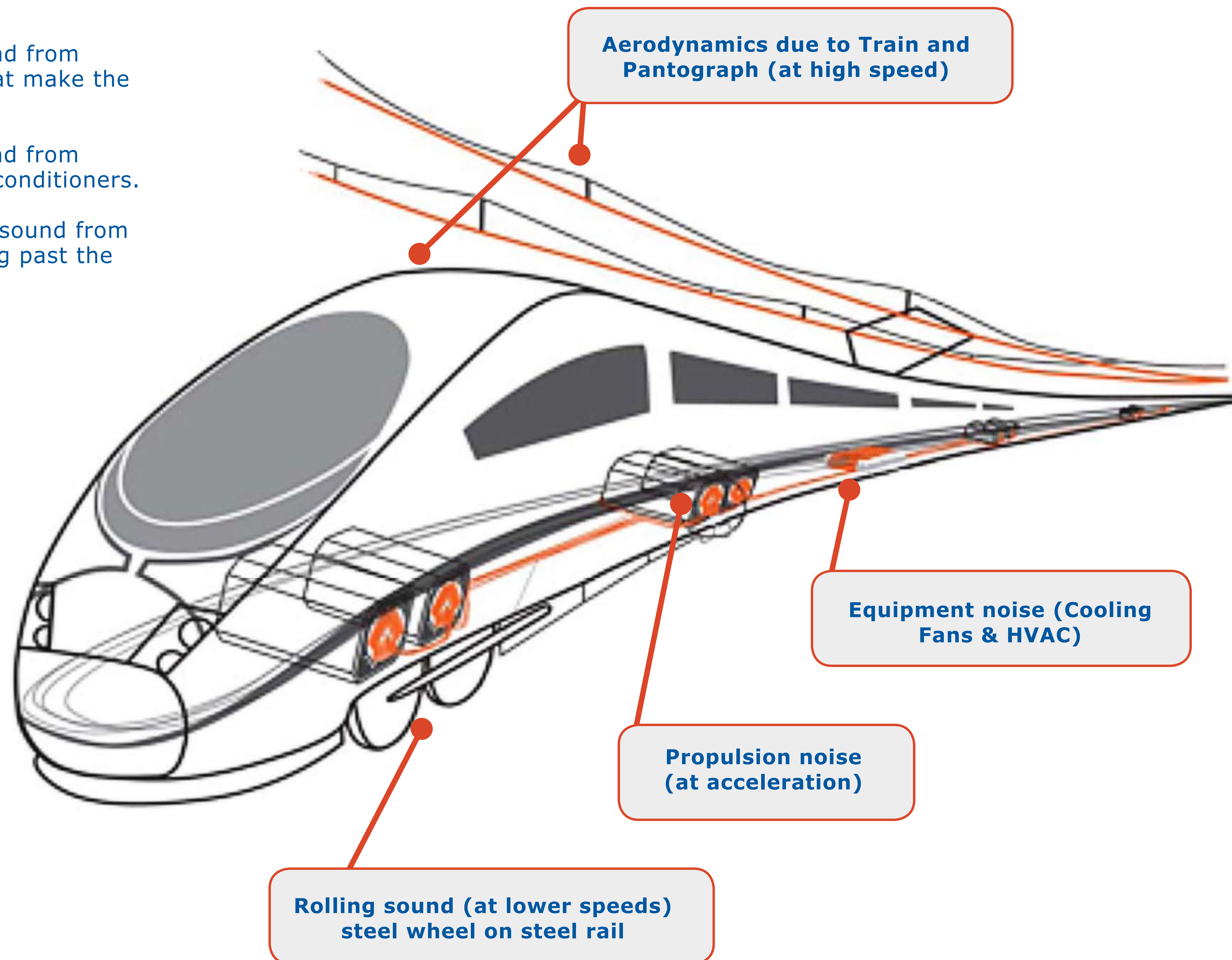
# SOUND

**Rolling** – sound from the wheels as trains move along the tracks.

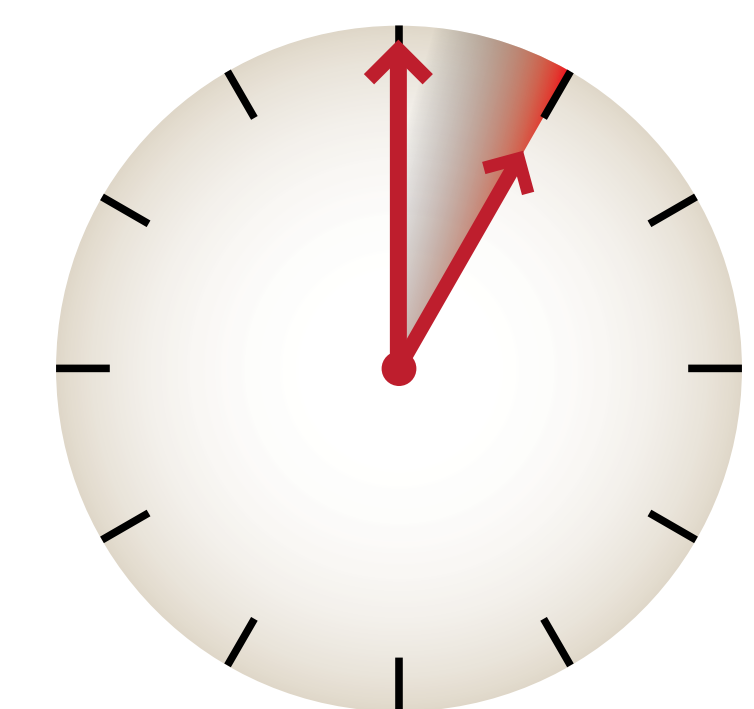
**Propulsion** – sound from motors and gears that make the train move.

**Equipment** – sound from cooling fans and air conditioners.

**Aerodynamics** – sound from the flow of air moving past the train at high speed.



**The review will look at two key measurements:**



One-Hour Equivalent Sound Level, which measures the moment-to-moment fluctuations in sound over a single hour – taking into account both the number of trains and the time they take to pass by – the best measure for assessing the impacts on offices, schools and libraries.



Day-Night Sound Level looks at sound fluctuations over a full 24 hours, taking into account the heightened sensitivity in residential areas to sounds made late at night.

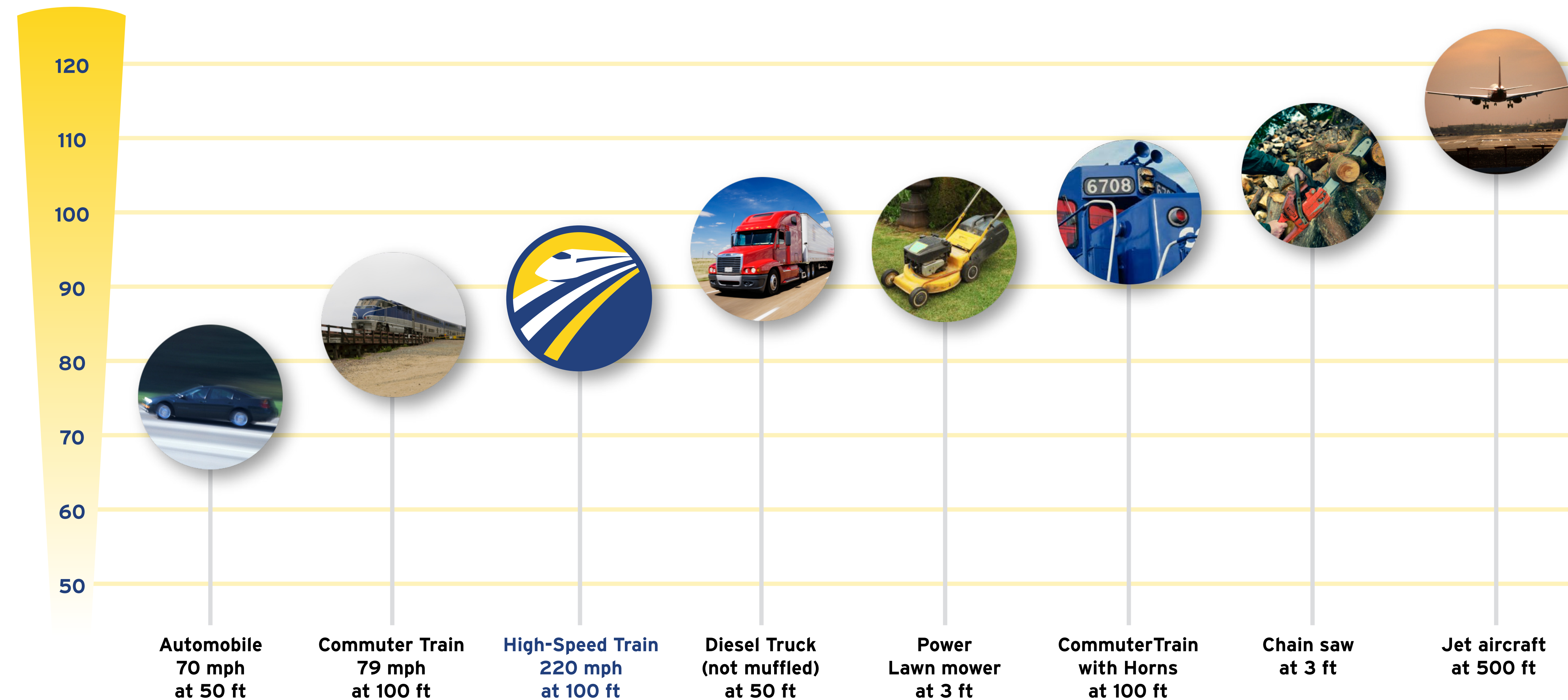
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# SOUND

## How does high-speed rail compare to other everyday noises?

Maximum level  
in decibels  
(single event)



**A train moving at 220 mph – the top speed of California's high-speed trains – will be heard for about four seconds**

**By comparison. . .  
A 50-car freight train traveling at 30 mph can be heard for one minute**

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# WHY WE NEED HIGH-SPEED RAIL



## **JOBS**

- 600,000 full-time, one-year, construction-related job-equivalents
- 5,000 permanent operations and maintenance jobs
- 450,000 economy-wide jobs by 2035

## **MOBILITY**

- "Economic power is how fast you move people and goods around the state."  
*Gov. Arnold Schwarzenegger, January 15, 2008*

## **ENVIRONMENT**

- Reduced greenhouse gases
- AB 32: California's 2006 landmark legislation to reduce greenhouse gas emissions 25% by 2020
- Population Growth
- California's population now: 38 million  
By 2035: 50 million



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# WHY WE NEED HIGH-SPEED RAIL



## *We can build...*

- New freeways, airport runways and more departure gates to address our expected population growth

*or*

## *We can achieve...*

- An 800-mile high-speed train system, powered by 100% renewable electricity generated by clean wind and solar energy



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# ***HOW TO PARTICIPATE***

- **Talk to high-speed train staff**
- **Fill in and drop off comment cards**
- **Add your e-mail to our mailing list**

**For more information after this meeting:**

**Call: (800) 881-5799**

**Visit: [www.cahighspeedrail.ca.gov](http://www.cahighspeedrail.ca.gov)**

**E-mail: [san.jose\\_merced@hsr.ca.gov](mailto:san.jose_merced@hsr.ca.gov)**

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